

## SYSTEM AND METHOD FOR REDUNDANT PATH CONNECTIONS IN DIGITAL COMMUNICATIONS NETWORK

### ABSTRACT OF THE INVENTION

5           A system and method for providing redundancy in an  
integrated circuit (IC) relay device has been disclosed. The relay device  
accepts communications on a first and second receive path. The relay  
device monitors communications on both the receive paths, and selects a  
path having a high degree of integrity. Likewise, the relay selectively  
10   supplies communications on a first and second transmit path. The relay  
device selects the transmit path having the proper measure of  
communication integrity. Communications integrity can be based upon  
internally monitored criteria such as bit error rate, synchronization, clock  
signals, and forward error correction. Alternately, the integrity is  
15   determined external to the relay, and the relay responds to external  
switch commands.